

Claims

- [c1] What is claimed is:
1. A multi-function projection system, comprising:
a light source which provides a light beam;
a color generation assembly which has at least one red, one green, and one blue filter to filter said light beam;
and
a band-cut filter which has at least one yellow beam filter segment to selectively move into said light beam.
 - [c2] 2. The multi-function projection system according to claim 1, wherein said light source is a metal halide lamp.
 - [c3] 3. The multi-function projection system according to claim 1, wherein said light source is an ultra high pressure lamp.
 - [c4] 4. The multi-function projection system according to claim 1, wherein a transmissivity position of cut out of said green filter is larger or equal to 578nm wavelength.
 - [c5] 5. The multi-function projection system according to claim 1, wherein a 50% transmissivity position of cut out of said green filter is larger or equal to 578nm wavelength.

- [c6] 6.The multi-function projection system according to claim 1, wherein a transmissivity position of cut in of said red filter is less or equal to 578nm wavelength.
- [c7] 7.The multi-function projection system according to claim 1, wherein a 50% transmissivity position of cut in of said red filter is less or equal to 578nm wavelength.
- [c8] 8.The multi-function projection system according to claim 1, wherein a filtering wavelength of said yellow beam filter of said band-cut filter is limited around 578nm wavelength.
- [c9] 9.The multi-function projection system according to claim 1, wherein said band-cut filter has a driver.
- [c10] 10.The multi-function projection system according to claim 9, wherein said driver is manual.
- [c11] 11. The multi-function projection system according to claim 9, wherein said driver is a motor.
- [c12] 12.The multi-function projection system according to claim 1, wherein frequency of moving said band-cut filter into a light path is synchronized to said red filter to filter the yellow beam within the red beam.
- [c13] 13.The multi-function projection system according to

claim 1, wherein frequency of moving said band-cut filter into the light path is synchronized to said green filter to filter the yellow beam within the green beam.

[c14] 14.The multi-function projection system according to claim 1, wherein frequency of moving said band-cut filter into the light path is synchronized to said red and green filter to filter the yellow beam within the red and green beam.

[c15] 15.The multi-function projection system according to claim 1, wherein said band-cut filter keeps out of the light path of said light beam.

[c16] 16.The multi-function projection system according to claim 1, wherein said projection system further comprises a screen to receive said beam of said light source, said band-cut filter being placed between said light source and said screen.

[c17] 17.The multi-function projection system according to claim 1, wherein said projection system further comprises an integration rod after said color generation assembly, said band-cut filter being placed between said color generation assembly and said integration rod.

[c18] 18.The multi-function projection system according to claim 1, wherein said band-cut filter is a color wheel

form which has at least one yellow filter segment and the other is transparent segment.

[c19] 19.The multi-function projection system according to claim 18, wherein said transparent segment can coat an anti-reflection.

[c20] 20.The multi-function projection system according to claim 1, wherein said band-cut filter is a long plank upon which has at least one yellow filter segment.